

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellants: Bergman, et al. Examiner: Dao, Thuy Chan
Serial No.: 10/630,959 Group: Art Unit 2192
Filed: July 30, 2003 Docket: YOR920030056US1 (8728-607)
For: **SYSTEMS AND METHODS FOR GENERATING AND
DISTRIBUTING EXECUTABLE PROCEDURES FOR
TECHNICAL DESK-SIDE SUPPORT**

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REPLY BRIEF

In response to the Examiner's Answer dated November 25, 2009, Applicants submit this Reply Brief. This Reply Brief is a re-dated copy of the Reply Brief dated July 27, 2009, without modification.

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1. REAL PARTY IN INTEREST

The real party in interest is International Business Machines Corporation, the assignee of the entire right, title, and interest in and to the subject application by virtue of an assignment of record.

2. RELATED APPEALS AND INTERFERENCES

(None)

3. STATUS OF CLAIMS

Claims 20-29, are pending, stand rejected, and are under appeal. Claims 1-20 and 30-34 have been canceled.

A copy of the Claims as pending is presented in the Claims Appendix.

4. STATUS OF AMENDMENTS

By the Amendment dated September 22, 2008, Claims 30-34 were canceled without prejudice. This amendment was entered.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates to systems and methods for creating procedures for providing technical support and executing the same.

Referring to Claim 20; A system for generating a reusable executable procedure, includes a client device comprising an application for monitoring and recording a procedure that is performed using said client device and generating an execution trace representing an instance of said procedure (see for example, page 12, lines 5-17); a procedure trace repository for storing stored execution traces associated with instances of said procedure (see for example, page 12, line 18-19); and a server for processing said execution traces and said stored execution traces to generate said reusable executable procedure, wherein said procedure can be automatically performed on the client by invoking the reusable executable procedure (see for example, page 12, line 21 to page 13, line 9).

Referring to Claim 26; A program storage device readable by machine, tangibly embodies a program of instructions executable by the machine to perform method steps for generating a reusable executable procedure (see for example, page 7, line 9-24). The method steps include obtaining a plurality of execution traces, wherein each execution trace represents an execution instance of a procedure (see for example, page 8, lines 6-12); and processing said execution traces to create a reusable executable procedure associated with said procedure, wherein said procedure can be automatically performed by invoking the reusable executable procedure (see for example, page 9, lines 5-22).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 20-29, including independent Claims 20 and 26, are rejected under 35 U.S.C. 102(e) as being anticipated by Messinger (US Patent No. 7,000,187).

B. Claims 20, and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Bala (US Patent Application No. 2004/0130572).

7. ARGUMENT

A. The Claim Rejections Under 35 U.S.C. 102 Are Legally Deficient.

Under 35 U.S.C. §102, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. See MPEP §2131.

i. Claim 20 (the listing of Claim 20 herein has been corrected, wherein “*processing said execution traces*” has been corrected to “*processing said execution trace*” as amended in the Response dated April 22, 2008.)

Claim 20 claims:

*A system for generating a reusable executable procedure, comprising:
a client device comprising an application for monitoring and recording a
procedure that is performed using said client device and generating an execution trace
representing an instance of said procedure;
a procedure trace repository for storing stored execution traces associated with
instances of said procedure; and
a server for processing said execution trace and said stored execution traces to
generate said reusable executable procedure, wherein said procedure can be
automatically performed on the client by invoking the reusable executable procedure.*

i(a) Claim 20 stands rejected as being anticipated by Messinger (US Patent No. 7,000,187).

Messinger teaches a method for displaying a sequence of instructions associated with a task in a graphical overlay, for example, for software training (see Abstract). Messinger does not teach “a server for processing said execution trace and said stored execution traces to generate said reusable executable procedure.” The Examiner suggested that various teachings of Messinger are analogous to the limitation at issue. Respectfully, as a general matter the teachings of Messinger are related to an entirely different field; Messinger teaches how an “on-line coach” operates based on user (trainee) input (see col. 2, lines 4-8). For example, Messinger’s “on-line coach” is not analogous to “a server for processing said execution trace and said stored execution traces to generate said reusable executable procedure,” as claimed in Claim 20. The “on-line coach” is similar to a wizard to the extent that it permits a user to specify tasks while guiding the user through individual steps of a task selected from a list of predefined tasks (see col. 2, lines 4-7). There is no teaching of how the “on-line coach” could be used to “generate said reusable executable procedure” as claimed in Claim 20. Indeed, where Messinger suggests that “a new task sequence is recorded” no description is provided about how the recording is performed. Additionally, Messinger does not teach that a recorded new task is processed with “said stored execution traces to generate said reusable executable procedure”, essentially as claimed in Claim 20; Messinger simply records a new task without concern for any previously stored tasks. Each task of Messinger is treated individually.

Furthermore, Messinger’s new task is not analogous to the claimed reusable executable procedure; for example, the new task of Messinger is simply another task responsive to user actions under the direction of the “on-line coach” and cannot advance until a user action is

completed (see FIG. 6B, blocks 260-275). Such a user prompted task is clearly not automatically performed, essentially as claimed in Claim 20. The tasks of Messinger are not automatic.

i(a)1 Reply to Examiner's Answer

The Examiner's Answer at page 13 essentially suggests that Messinger's teaching of selecting different levels of coaching, showing more or less detail, is analogous to generating a reusable executable procedure. More particularly, the Examiner states that

"the on-line coach may retrieve a saved/stored task with level 'beginning' or 'advanced' (processing stored execution traces) and adds steps (such as adding steps to the task with level 'beginning') or delete steps (such as deleting steps from task with level 'advanced'), i.e., processing an execution trace, to generate a task with level 'intermediate'".

The above interpretation, and in particular adding and/or deleting steps, has no support what-so-ever in Messinger; Messinger teaches only that different levels of information may be displayed. Merely changing a level of displayed detail does not teach adding and/or deleting steps from the underlying task sequence; once recorded, no task sequence of Messinger is modified. At most, Messinger teaches that a new task sequence may be recorded (see FIG. 8, block 285), but utterly fails to teach a processing of a generated execution trace and a stored execution trace to generate a reusable executable procedure, essentially as claimed.

In view of the foregoing, Messinger fails to teach all the limitations of Claim 20.

i(b) Claim 20 stands rejected as being anticipated by Bala (US Patent Application No. 2004/0130572).

Bala teaches methods for authoring and executing wizards, wherein wizards are updated through a feedback system (see Abstract). Bala fails teach "a server for processing said execution

trace and said stored execution traces to generate said reusable executable procedure, wherein said procedure can be automatically performed on the client by invoking the reusable executable procedure” as claimed in Claim 20. Bala merely teaches how a user can create script for a task (see paragraphs [0074-000079]). Bala is totally devoid of description related multiple scripts, much less “processing said execution trace and said stored execution traces to generate said reusable executable procedure,” as claimed in Claim 20. Applicants point to the claimed processing of multiple execution traces (“said execution trace and said stored execution traces”) to generate a reusable execution procedure. Bala is limited to the treatment of single scripts and nowhere discloses how to process multiple scripts to generate a reusable execution procedure.

i(b)1 Reply to Examiner’s Answer

In view of the Examiner’s Answer at page 16, the rejection essentially relies on the editing of natural language description for anticipating the claimed limitation of the “execution trace” and a script containing the description of the task as a stored execution trace. Even assuming the Examienr’s interpretation of an execution trace as being inclusive of a natural language description, the natural language description is not assocaited with more than one script. Thus, Bala does not ananticipate the claims “stored execution traces”.

Therefore, Bala fails to teach all the limitations of Claim 20.

It has not demonstrated how the cited references Messinger or Bala teach “a server for processing said execution trace and said stored execution traces to generate said reusable executable procedure, wherein said procedure can be automatically performed on the client by invoking the reusable executable procedure” as claimed in Claim 20. Accordingly, the rejections of Claim 20 should be overruled.

ii. **Claims 26**

Claim 26 claims:

A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for generating a reusable executable procedure, the method steps comprising:

obtaining a plurality of execution traces, wherein each execution trace represents an execution instance of a procedure; and

processing said execution traces to create a reusable executable procedure associated with said procedure, wherein said procedure can be automatically performed by invoking the reusable executable procedure.

ii(a). Claim 26 stands rejected as being anticipated by Messinger.

Messinger teaches a method for displaying a sequence of instructions associated with a task in a graphical overlay, for example, for software training (see Abstract). Messinger does not teach “obtaining a plurality of execution traces, wherein each execution trace represents an execution instance of a procedure; and processing said execution traces to create a reusable executable procedure associated with said procedure” as claimed in Claim 26. Although Messinger arguably suggests recording a new task sequence in block 385 of FIG. 8, Messinger fails to teach “obtaining a plurality of execution traces, wherein each execution trace represents an execution instance of a procedure; and processing said execution traces to create a reusable executable procedure associated with said procedure” - for example, Messinger merely adds a new task to a task list. Messinger does not teach that the recorded new task is processed with

other tasks to create a reusable executable procedure essentially as claimed in Claim 26; here Applicants emphasize the plurality of “execution traces” processed as opposed to Messinger’s individually maintained tasks. There is no processing of multiple tasks by Messinger to create a reusable executable procedure, essentially as claimed.

ii(a)1 Reply to Examiner’s Answer

The Examiner’s Answer at page 17 essentially suggests that Messinger’s teaching of adding a new task to a task list, is analogous to the claimed limitations of “obtaining a plurality of execution traces, wherein each execution trace represents an execution instance of a procedure; and processing said execution traces to create a reusable executable procedure associated with said procedure.”

Messinger teaches that a new task sequence may be recorded (see FIG. 8, block 285), but fails to teach a processing of a generated execution trace and a stored execution trace to generate a reusable executable procedure, essentially as claimed. The tasks of Messinger are in no way processed in groups; that is each task is atomic.

Therefore, Messinger fails to teach all the limitations of Claim 26.

ii(b). Claim 26 stands rejected as being anticipated by Bala.

Bala teaches methods for authoring and executing wizards, wherein wizards are updated through a feedback system (see Abstract). Bala does not teach the process of “obtaining a plurality of execution traces, wherein each execution trace represents an execution instance of a procedure; and processing said execution traces to create a reusable executable procedure associated with said procedure” as claimed in Claim 26. Bala merely teaches how a user can create script for a task (see paragraphs [0074-000079]). Bala is totally devoid of description

related multiple scripts. Bala's method creates a script from a document, parsing the document to identify steps (see paragraph [0074]). Creating a script from a document is clearly not analogous to the generation of a reusable executable procedure from multiple execution traces, essentially as claimed in Claim 26. Stated another way, consider that a document is not a script; the script of Bala is not created based on other scripts, essentially as claimed in Claim 26.

i(b)1 Reply to Examiner's Answer

In view of the Examiner's Answer at pages 17-18, the rejection essentially relies on the atomic steps for anticipating the claimed limitation of the "execution traces." Respectfully, a single atomic step is not analogous to a trace or an execution of a procedure. That is, the claim language clearly requires that each execution trace represents an execution instance of a procedure. Bala's atomic steps by definition represent different procedures needed to perform some task. Therefore, the atomic steps of Bala are not analogous to the claimed "execution traces."

Therefore, Bala fails to teach all the limitations of Claim 26.

It has not demonstrated how the cited references Messinger or Bala teach "obtaining a plurality of execution traces, wherein each execution trace represents an execution instance of a procedure; and processing said execution traces to create a reusable executable procedure associated with said procedure" as claimed in Claim 26. Accordingly, the rejections of Claim 26 should be overruled.

iii. Claims 21-25 and 27-29

Claims 21-25 depend from Claim 20. Claims 26-29 depend from Claim 26. The

dependent claims are believed to be allowable for at least the reasons given for Claims 20 and 26, respectively. Reconsideration of the rejection is respectfully requested.

C. Conclusion

The claimed invention is not disclosed or suggested by the teachings of the applied prior art references, either alone or in combination. The Examiner has failed to establish a case of anticipation of the presently claimed method under 35 U.S.C. §102 in view of Messinger in view of Claims 20 and 26, and Bala in view of Claims 20 and 26. Claims 21-25 and 27-29 are believed to be allowable for at least the reasons given for the respective independent claims. Accordingly, it is respectfully requested that the Board overrule the rejections of Claims 20-29.

Respectfully Submitted,

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8. CLAIMS APPENDIX

1-20. (Canceled)

20. A system for generating a reusable executable procedure, comprising:
 - a client device comprising an application for monitoring and recording a procedure that is performed using said client device and generating an execution trace representing an instance of said procedure;
 - a procedure trace repository for storing stored execution traces associated with instances of said procedure; and
 - a server for processing said execution trace and said stored execution traces to generate said reusable executable procedure, wherein said procedure can be automatically performed on the client by invoking the reusable executable procedure.
21. The system of claim 20, further comprising a library for storing reusable executable procedures.
22. The system of claim 20, wherein the server distributes a reusable executable procedure to a client device comprising an execution engine for executing said reusable executable procedure.
23. The system of claim 22, wherein said reusable executable procedure is executed for upgrading software residing on the client device.

24. The system of claim 22, wherein said reusable executable procedure is executed for providing diagnostic support.

25. The system of claim 22, wherein an execution engine of a client device comprises means for allowing a user to manually execute at least a portion of said reusable executable device and generating an execution trace representing said manual execution, wherein said execution trace representing said manual execution is processed by said server to augment said reusable executable procedure.

26. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for generating a reusable executable procedure, the method steps comprising:

obtaining a plurality of execution traces, wherein each execution trace represents an execution instance of a procedure; and

processing said execution traces to create a reusable executable procedure associated with said procedure, wherein said procedure can be automatically performed by invoking the reusable executable procedure.

27. The program storage device of claim 26, wherein the instructions for obtaining an execution trace comprise instructions for monitoring and recording a sequence of actions that are performed by an individual when executing an instance of said procedure.

28. The program storage device of claim 26, wherein the instructions for processing said execution traces comprise instructions for performing the steps of:

aligning said execution traces to identify corresponding steps between said execution traces; and

generalizing said aligned execution traces to generate said reusable executable procedure.

29. The program storage device of claim 26, further comprising instructions for performing the step of augmenting said reusable executable procedure using an execution trace that is obtained during execution of said reusable executable procedure.

30-34. (Canceled)

9. EVIDENCE APPENDIX

(None)

10. RELATED PROCEEDINGS APPENDIX

(None)